

1. (Previously Presented) A method for associating at least one medical device with a controller that is remote from the medical device, the method comprising the steps of:

providing a device identifier that includes device identifier information identifying a medical device within a communication network;

providing a portable data collector;

with the portable data collector spatially proximate the device identifier, obtaining the device identifier information via the data collector;

transferring the device identifier information from the data collector to the controller;

using the device identifier information to associate the controller with the medical device so that the controller can communicate with the medical device; and

causing the controller to send a first communication to the medical device and receiving the first communication at the medical device.

2. (Original) The method of claim 1 wherein the obtaining and transferring steps are via wireless communication.

3. (Original) The method of claim 1 wherein first communication is a wireless communication.

4. (Original) The method of claim 3 wherein the step of sending the first communication includes the step of transmitting a controller address of the controller within the communication network.

5. (Original) The method of claim 3 further including the step of, in response to the first wireless communication, causing the medical device to perform a safety function.

6. (Original) The method of claim 5 wherein the medical device includes an indicator and the safety function includes activating the indicator.

7. (Original) The method of claim 5 wherein the medical device includes a transmitter and the safety function includes causing the medical device to transmit a second wireless communication responsive to the first communication.

8. (Original) The method of claim 7 wherein the second wireless communication includes the status of the medical device.

9. (Original) The method of claim 7 wherein the second communication is transmitted to the controller.

10. (Previously Presented) The method of claim 5 further including the steps of storing a first patient information set in the medical device indicating information related to a patient for which the medical device has been provided and storing a second patient information set in the controller indicating information related to a patient and wherein the step of causing the controller to send a first wireless communication includes the step of transmitting the second patient information set to the medical device, the step of receiving includes receiving the first patient information subset at the medical device and wherein the step of causing the device to perform a safety function includes comparing the first and second patient information sets.

11. (Previously Presented) The method of claim 10 further including the step of providing an indicator on the medical device and wherein the step of causing the device to perform a safety function further includes the step of, when the first and second patient information sets are different, activating the indicator.

12. (Original) The method of claim 10 wherein the step of storing the first patient information set on the medical device includes the step of storing the first patient information set on an information device, the information device being one of a medication delivery container, a patient mounted device and a physician's computing device, establishing a communication link between the information device and the medical device and transferring the first patient information set from the information device to the medical device.

13. (Original) The method of claim 12 wherein the information device is an IV bag.

14. (Original) The method of claim 10 wherein the step of storing the first patient information set on the medical device includes the step of providing a medical device interface and entering the first patient information set via the interface device.

15. (Original) The method of claim 10 wherein each of the medical device and the controller are system devices, the method further includes the step of providing at least a third system device and wherein the step of storing the second patient information set on the controller includes the step of storing the second patient information set on the third system device, establishing a communication link between the third system device and the controller and transferring the second patient information set from the third system device to the controller.

16. (Original) The method of claim 15 wherein the step of providing the third system device includes the step of providing a patient mounted device.

17. (Original) The method of claim 16 wherein the step of providing a patient mounted device includes providing a wrist band.

18. (Original) The method of claim 10 wherein the step of storing the second patient information set on the controller includes the step of providing a controller interface and entering the second patient information set via the interface device.

19. (Original) The method of claim 7 further including the steps of storing a first patient information set in the medical device indicating information related to a patient for which the medical device has been provided and storing a second patient information set in the controller indicating information related to a patient and wherein the step of causing the device to perform a safety function includes the steps of transferring a second wireless communication to the controller including the first patient information set and comparing the first and second patient information sets.

20. (Previously Presented) The method of claim 19 further including the step of providing an indicator on the medical device and wherein the step of causing the device to perform a safety function further includes the step of, when the first and second patient information sets are different, activating the indicator.

21. (Original) The method of claim 1 wherein the medical device is an infusion pump.

22. (Previously Presented) The method of claim 1 further including the steps of, after associating, causing the controller and medical device to perform a health safety function.

23. (Previously Presented) The method of claim 22 further including the steps of storing a first patient information set in the medical device indicating information related to a patient for which the medical device has been provided and storing a second patient information set in the controller indicating information related to a patient, the medical device and controller each being system devices and the first and second patient information sets each being identifying information sets and, wherein, the step of causing the controller and medical device to perform a health safety function further includes the steps of causing a first of the system devices to transmit a first of the identifying information sets to a second of the system devices, receiving the first identifying information set at the second system device and comparing the first and second identifying information sets.

24. (Previously Presented) The method of claim 23 further including the step of providing an indicator linkable to the second of the system devices and wherein the step of causing the controller and medical device to perform a health safety function further includes the step of, where the first and second identifying sets are different, activating the indicator.

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193. (Currently Amended) The method of claim 1 wherein the obtaining step includes reading a bar code on the medical device and the transferring step includes wirelessly transferring the device identifier information ~~network address~~.

194. (Previously Presented) A method for associating at least one medical device with a controller that is remote from the medical device, the method comprising the steps of:

providing a device identifier that includes device identifier information identifying a medical device within a communication network;

providing a data collector;

obtaining the device identifier information via the data collector;

transferring the device identifier information from the data collector to the controller;

using the device identifier information to associate the controller with the medical device so that the controller can communicate with the medical device;

(a) obtaining at least one of medication information from a medication container, patient information from a patient identification device, and physician identification from a physician identification device;

(b) the method further including performing at least two of the following identifying steps:

(i) identifying the time at which the device identifier information is obtained;

(ii) identifying the time at which the medication information is obtained from the medication container; and

(iii) identifying the time at which the patient information is obtained from the patient identification device; and

(c) the method further including the step of comparing at least two of the identified times and when the duration between the compared times exceeds a threshold period, performing a health safety function.

195. (Previously Presented) The method of claim 194 wherein the identifying steps that may be performed in step (b) further include:

(iv) identifying an authorize activation time indicating when a device has been authorized to deliver a medication to a patient;

the method further including performing at least a third one of the identifying steps, the step of comparing including determining when the duration between the at least three identified times exceeds the threshold period, the health safety function performed when the duration between the compared times exceeds the threshold period.

196. (Previously Presented) The method of claim 195 wherein the identifying steps that may be performed in step (b) further include:

(v) identifying a delivery activation time indicating when an activation command has been received to deliver a medication to a patient via the device; and

(vi) identifying a verification time indicating when a medication verification process has been completed;

the method further including performing at least a fourth one of the identifying steps, the step of comparing including determining when the duration between the at least four identified times exceeds the threshold period, the health safety function performed when the duration between the compared times exceeds the threshold period.

197. (Previously Presented) The method of claim 194 wherein each of the step of obtaining the medical device address and the step of obtaining at least one of the medication information and the patient information includes reading a machine readable label.

198. (Previously Presented) The method of claim 194 wherein the step of obtaining at least one of medication information from a medication container and patient information from a patient identification device includes obtaining the information using

the data collector, the method further including transferring the obtained information to the controller.

199. (Previously Presented) The method of claim 198 wherein the step of identifying at least two times includes identifying the at least two times using the data collector, the method further including the step of transferring the at least two times to the controller.

200. (Previously Presented) The method of claim 194 wherein the step of performing a health safety function includes one of the data collector and the controller transmitting a signal to the medical device to disable the medical device.

201. (Previously Presented) The method of claim 1 further including the steps of obtaining patient identification information indicating a patient that is to be associated with the controller, associating the controller with the patient identification information, providing medication information on a medication container, obtaining the medication information from a medication container, using the medication information to determine specific patient information for whom the medication was dispensed, comparing the patient identification information indicating the patient that is associated with the controller and the specific patient identification information and determining that the patient identification information indicating the patient that is associated with the controller is different than the specific patient identification information and activating an indicator.

202. (Previously Presented) The method of claim 3 wherein the device identifier information includes a medical device address and the method further including the step of using the medical device address to send the first wireless communication.

203. (Previously Presented) The method of claim 1 further including the steps of, after the step of associating the medical device with the controller, communicating wherein the medical device wirelessly transmits information to the controller.

204. (Previously Presented) The method of claim 203 further including the steps of providing at least a second medical device that is not associated with the controller wherein, when any medical device transmits information that is received by the controller, the controller determines if the controller is associated with the transmitting device and wherein the controller only uses received information from associated medical devices and ignores received information from devices that are not affiliated with the controller.

205. (Previously Presented) The method of claim 1 wherein the medical device is a first medical device and the device identifier information of the first medical device is a first device identifier information, the method further including the steps of providing a first indicator that is associated with the first medical device, providing a second medical device associated with a second device identifier information and a second indicator, obtaining the second device identifier information via the data collector, transferring the second device identifier information from the data collector to the controller and associating the controller with the second medical device so that the controller can communicate with the second medical device, using the controller to select information related to the first medical device and using the first device identifier information to send a signal to the first medical device, receiving the signal by the first medical device and using the signal to activate the first indicator.

206. (Previously Presented) The method of claim 1 wherein the at least one medical device includes an infusion pump, the method further including the steps of transmitting a signal from the infusion pump to the controller indicating that the infusion pump is no longer operative and, when the signal is received at the controller, disassociating the controller from the infusion pump.



207. (Previously Presented) The method of claim 206 further including the steps of, prior to transmitting the signal from the infusion pump to the controller indicating that the infusion pump is no longer operative, determining that an infusion pump line is no longer connected to the infusion pump, the step of transmitting the signal from the infusion pump including transmitting the signal when the line is disconnected from the infusion pump.

208. (Previously Presented) The method of claim 1 further including the steps of providing a patient identifier that includes patient identifying information, using the data collector to obtain the patient identifying information from the patient identifier and transmitting the patient identifying information to the controller.

209. (Previously Presented) The method of claim 208 further including the steps of providing at least a first medication container that includes medication information associated with a medication in the first medication container, the medication information including specific patient information indicating the patient for whom medication in the container is prescribed, obtaining at least a subset of the medication information from the first medication container using the data collector and transmitting the at least a subset of the medication information to the controller.

210. (Previously Presented) The method of claim 209 further including the steps of using the medication information transmitted to the controller to identify specific patient information indicating the patient for whom the medication in the first medication container has been prescribed, comparing the patient identifying information from the patient identifier and the specific patient information and when the compared information is different, activating an indicator.

211. (Previously Presented)      The method of claim 210 wherein the step of using the medication information transmitted to the controller to identify specific patient information includes the step of transferring the medication information from the controller to a remote computer and locating the specific patient identification information by the remote computer in a medication database.

212. (Previously Presented)      The method of claim 1 including the steps of providing a medication container with a medication identifier containing medication information, using the data collector to obtain the medication information from the medication identifier, transmitting the medication information from the data collector to the controller and using the medication information to control the medical device.

213. (Previously Presented)      The method of claim 212 wherein the step of using the medication information to control the medical device includes the steps of the controller transferring the medication information to a medication database, using the medication information to identify medication control information in the database, providing the medication control information to the controller and the controller using the medication control information to control the medical device.

214. (Previously Presented) The method of 1 wherein the medical device includes a infusion pump that includes at least first and second pump assemblies and where the device identifier information is a first device identifier information associated with the first pump assembly, the method further including the steps of providing a second device identifier information for the second pump assembly, obtaining the second device identifier information using the data collector, transmitting the second device identifier information to the controller and the controller using the first and second device identifier information to monitor operation of the first and second pump assemblies.

215. (Previously Presented) The method of claim 214 further including the steps of obtaining with the data collector first and second medication information from first and second medication labels associated with first and second infusion bags containing first and second medications and transferring the first and second medication information to the controller and determining that the first and second medications can be used together.

216. (Previously Presented) The method of claim 215 wherein the step of determining that the first and second medications can be used together includes determining that the first and second medications are for the same patient.

217. (Previously Presented) The method of claim 1 further including the step of associating the controller with a patient.

218. (Cancelled).

219. (Previously Presented) The method of claim 1 further including the steps of identifying at least two times when data obtaining events occur, comparing the

data obtaining times and when the duration between data obtaining times for the events exceeds a threshold period, performing a health safety function.

220. (Previously Presented) The method of claim 219 further including the step of obtaining at least one of medication information from a medication container and patient information from a patient identification device, the step of identifying at least two times including identifying at least two of:

the time at which the device identifier information is obtained;

the time at which the medication information is obtained from the medication container;

the time at which the patient information is obtained from the patient identification device;

a prescribed time indicating the time prescribed for delivery of the medication to a patient;

an authorize activation time indicating when a device has been authorized to deliver a medication to a patient; and

a delivery activation time indicating when an activation command has been received to deliver a medication to a patient via the device.

221. (Previously Presented) The method of claim 194 wherein the step of performing a health safety function includes activating an indicator at one of the data collector, the medical device, and the controller.

222. (Previously Presented) The method of claim 194 wherein the identifying steps that may be performed in step (b) further include:

identifying a prescribed time indicating the time prescribed for delivery of the medication to a patient.

223. (Currently Amended) A method for using a data collector to obtain information and determine that the information has been obtained within a threshold period of time comprising the steps of:

(a) obtaining at least two of medication information from a medication container, patient information from a patient identification device and device identifier information corresponding to a medical device within a communication network;  
providing a data collector;

(b) the method further including performing at least two of the following identifying steps:

(i) identifying the time at which the device identifier information  
~~network address~~ is obtained;

(ii) identifying the time at which the medication information is obtained from the medication container; and

(iii) identifying the time at which the patient information is obtained from the patient identification device; and

(c) the method further including the step of comparing at least two of the identified times and when the duration between the compared times exceeds a threshold period, performing a health safety function.

224. (Previously Presented) The method of claim 223 wherein the identifying steps performable in step (b) include:

(iv) identifying an authorize activation time indicating when a device has been authorized to deliver a medication to a patient;

the method further including performing at least a third one of the identifying steps, the step of comparing including determining when the duration between the at least three identified times exceeds the threshold period, the health safety function performed when the duration between the compared times exceeds the threshold period.

225. (Previously Presented) The method of claim 224 wherein the identifying steps performable in step (b) include:

(vi) identifying a delivery activation time indicating when an activation command has been received to deliver a medication to a patient via the device; and

(vii) identifying a verification time indicating when a medication verification process has been completed;

the method further including performing at least a fourth one of the identifying steps, the step of comparing including determining when the duration between the at least four identified times exceeds the threshold period, the health safety function performed when the duration between the compared times exceeds the threshold period.

226. (Previously Presented) The method of claim 223 wherein the each of the step of obtaining the medical device address and the step of obtaining at least one of the medication information, and the patient information include reading a machine readable label.

227. (Previously Presented) The method of claim 223 wherein the step of obtaining at least one of medication information from a medication container and patient information from a patient identification device includes obtaining the information using the data collector, the method further including transferring the obtained information to a remote controller.

228. (Previously Presented) The method of claim 227 wherein the step of identifying at least two times includes identifying the at least two times using the data collector, the method further including the step of transferring the at least two times to the controller.

229. (Previously Presented) The method of claim 223 wherein the step of performing a health safety function includes one of the data collector and the controller transmitting a signal to the medical device to disable the medical device.

230. (Previously Presented) A method for using a data collector to obtain information and determine that the information has been obtained within a threshold period of time comprising the steps of:

providing a data collector where the data collector collects information from machine readable identifiers and communicates the information to one of a medical device and a remote controller;

using the data collector to obtain at least two of medication information from a medication container, patient information from a patient identification device, physician identification from a physician identification device and device identifier information corresponding to a medical device within a communication network;

the method further including performing at least two of the following identifying steps:

(i) identifying the time at which the device identifier information is obtained;

(ii) identifying the time at which the medication information is obtained from the medication container; and

(iii) identifying the time at which the patient information is obtained from the patient identification device; and

the method further including the step of comparing at least two of the identified times and when the duration between the compared times exceeds a threshold period, performing a health safety function.

231. (Previously Presented) The method of claim 2 wherein the step of obtaining includes at least one of reading reflected electromagnetic energy, obtaining information from a radio frequency identifier and receiving an infra-red transmission.



232. (Previously Presented) A method for associating at least one medical device with a controller that is remote from the medical device, the method comprising the steps of:

providing a device identifier that includes device identifier information identifying a medical device within a communication network;

providing a portable data collector;

with the portable data collector spatially proximate the device identifier, obtaining the device identifier information via the data collector;

transferring the device identifier information from the data collector to the controller;

using the device identifier information to associate the controller with the medical device so that the controller can communicate with the medical device; and

after the step of associating, at least one of:

(i) causing the controller to send a first communication to the medical device and receiving the first communication at the medical device; and

(ii) causing the medical device to send a first communication including the device identifier information to the controller and receiving the first communication at the controller and using the first communication at the controller when the received device identifier information in the first communication corresponds to the obtained device identifier information.

233. (Previously Presented) The method of claim 1 wherein the controller is located in a location in one of a patient room where the medical device is located, a nurse station and a central location.

234. (Currently Amended) The A method of claim 1 wherein the medical device includes for associating at least one of first and second subassemblies and where the method is for associating at least one of the first and second subassemblies of a medical device with a controller that is remote from the medical device, the method comprising the steps of:

wherein the step of providing a device identifier includes providing the first and second subassemblies with first and second subassembly identifiers that includes first and second subassembly identifier information identifying the medical device and the first and second subassemblies within a communication network, respectively;

the method further including the step of manually selecting the first subassembly;

the step of obtaining the device identifier information including, with the portable data collector spatially proximate the first subassembly identifier, obtaining the first subassembly identifier information via the data collector;

the step of transferring including transferring the first subassembly identifier information from the data collector to the controller;

the step of using the device identifier information to associate including using the first subassembly identifier information to associate the controller with the medical device and the selected subassembly so that the controller can communicate with the medical device; and

the step of causing the controller to send a first communication including causing the controller to send a first communication to the medical device and receiving the first communication at the medical device; and

the method further including the step of and the medical device associating the communication with the first subassembly.

235. (Currently Amended) The method of 234 wherein the medical device includes a infusion pump that includes the first and second pump assemblies corresponding to the first and second subassemblies, the method further including the steps of with the portable data collector spatially proximate the second pump subassembly identifier obtaining the second pump subassembly identifier information using the data collector, transmitting the second pump ~~Michael A. Jaskolski~~ identifier information to the controller and the controller using the first and second pump subassembly identifier information to monitor operation of the first and second pump assemblies.

236. (Previously Presented) The method of claim 234 further including the steps of obtaining with the data collector first and second medication information from first and second medication labels associated with first and second infusion bags containing first and second medications and transferring the first and second medication information to the controller and determining that the first and second medications can be used together.

237. (Previously Presented) The method of claim 236 wherein the step of determining that the first and second medications can be used together includes determining that the first and second medications are for the same patient.

238. (Previously Presented) A method for associating at least one medical device with a controller that is remote from the medical device, and one of a patient and a medication, the method comprising the steps of:

- providing a device identifier that includes device identifier information identifying a medical device within a communication network;

- providing a second identifier that includes second identification information, where the second identifier is selected from a patient identifier linked to a patient mounted device and a medication identifier linked to a medication container;

- providing a portable data collector;

- obtaining the device identifier information and the second identification information via the data collector;

- transferring the device identifier information and the second identification information from the data collector to the controller;

- using the device identifier information to associate the controller with the medical device and associate the second identification information with control information for the medical device so that the controller can communicate with the medical device; and

- causing the controller to send a first communication to the medical device including at least a portion of the control information and receiving the first communication at the medical device.